

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number  
**WO 2005/037453 A1**

(51) International Patent Classification<sup>7</sup>: **B07C 5/36,**  
B65G 47/96

WL Hengelo (NL). **VAN DEN BERG, Wouter** [NL/NL];  
Populierendreef 238, NL-2272 HA Voorburg (NL).

(21) International Application Number:  
PCT/NL2004/000704

(74) Agent: **WINCKELS, J., H., F.**; Vereenigde, Johan de Wit-  
tlaan 7, NL-2517 JR Den Haag (NL).

(22) International Filing Date: 7 October 2004 (07.10.2004)

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(25) Filing Language: Dutch

(26) Publication Language: English

(30) Priority Data:  
03078198.3 9 October 2003 (09.10.2003) EP

(71) Applicant (*for all designated States except US*): **FPS  
FOOD PROCESSING SYSTEMS B.V.** [NL/NL]; Burg.  
G.J.F. Tjeldemanstraat 13, NL-2631 RE Nootdorp (NL).

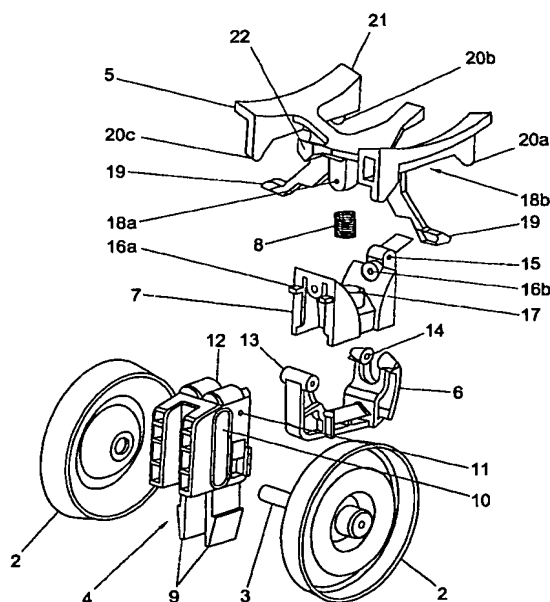
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **VAN WIJNGAAR-  
DEN, Erik** [NL/NL]; C. Voorberghstraat 108, NL-7558

(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: CARRIER FOR SORTING APPARATUS



(57) Abstract: The present invention relates to an apparatus for sorting products such as fruits, the apparatus comprising : an endless conveyor, for instance a chain; conveying units for conveying the products, all one behind the other in a conveying direction and situated in a substantially horizontal plane, each connected with the conveyor, and each for conveying a single product, wherein each conveying unit is formed by : at least two rolling elements with the axes perpendicular to the conveying direction, for instance diabolo-like rolling elements; a connecting element by which each rolling element is rotatably and vertically movably connected with the conveyor; and a carrier element arranged between the rolling elements, while at least in an inspection position each product is situated on two successive rolling elements, and in a weighing position each product is situated on the carrier element, and each carrier element is connected with moving means for moving the carrier element to and from the weighing position for laterally discharging the product onto an output apparatus, wherein the discharge guide means assume the discharge position when they are energized by energizing means, while discharge positions for lateral discharge on both sides of the conveyor can be assumed. More particularly, the discharge guide means comprise a leaf spring, which leaf spring assumes a rest position in the case of conveyance and weighing, and has a deflection only upon movement to and from the discharge position. Compact and widely deployable sorting machines are thus enabled in an advantageous manner.



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*